REMARKS

This is in response to the Office Action dated July 2, 2003. Claims 1-3 and 5-9 are pending.

Claim 1 stands rejected under 35 U.S.C. Section 102(e) as being allegedly anticipated by Horie (US 6,323,052). This Section 102(e) rejection is respectfully traversed for at least the following reasons.

Claim 1 requires that "the semiconductor laser device includes an active layer comprised of GaAlAs, wherein said active layer is uniform with respect to absorption of an emission wavelength throughout its length including at respective end portions thereof." As explained in the instant specification, the active layer 53 is deposited in the same manner throughout its length, and oxygen is prevented from entering the layer at ends thereof due to the protective layer(s); thereby allowing the active layer to be uniform with respect to absorption of an emission wavelength throughout its length including at end portions thereof. Horie fails to disclose or suggest the aforesaid underlined aspect of claim 1.

Horie discloses a light emitting device which, as shown in Fig. 1, includes a-Si film 14 and a dielectric layer 15, 16 which may be of aluminum oxide. However, Horie significantly differs from the invention of claim 1 in that Horie expressly requires that the active layer is much more transmissive to emission wavelengths in the vicinity of the end facets than at other locations. Horie achieves the desired *non-uniformity* of absorption by irradiating the facets with plasma or the like (the so-called window structure) (e.g.,

Abstract, lines 11-12; col. 4, lines 12-17 and 44-58; and col. 18, lines 27-56). In fact, Horie states that this irradiation of the facets of the active layer to make them non-uniform with respect to absorption compared to the rest of the layer is the entire "basis" of Horie's invention (col. 4, lines 52-59).

In Horie, it is critical that the active layer is much more transmissive to emission wavelengths in the vicinity of the end facets than at other locations. Exhibit 1 attached hereto includes Table 1 which includes Horie's Examples 1-2 and Horie's Comparative Examples 1-3. Comparing Hories Examples 1-2 with Horie's Comparative Examples 1-3 as shown in Exhibit 1 hereto, it is clearly understood that the process of irradiating the facet with plasma (process for window structure), in order to cause the active layer to be more transmissive near the facets than at other areas, is essential for Horie's invention. This is because Horie's Comparative Examples 1-3 have no window structure and thus (a) failed the accelerated life test, (b) had undesirable Ga-O/As-O on the facet, and (c) had undesirable band energy characteristics in the vicinity of the facets.

In contrast with Horie, the invention of claim 1 uses a an active layer comprised of GaAlAs (as opposed to the undoped InGaAs used in Horie's Examples), wherein the active layer is *uniform with respect to absorption of an emission wavelength throughout its length including at respective end portions thereof.* Applicant has surprisingly found for example that good results can be achieved as shown in Fig. 4 of the instant application by using the claimed structure recited in claim 1, as opposed to the non-uniform structure of Horie.

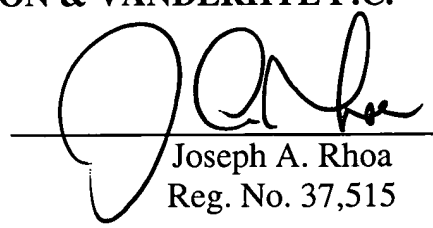
It can be seen from the above that Horie teaches directly away from the invention of claim 1 because Horie teaches that it is critical to create non-uniformity by using the window structure. Horie cannot possibly anticipate or otherwise render the invention of claim 1 unpatentable. Moreover, one of ordinary skill in the art would never have modified Horie to meet this aspect of claim 1 because to do so would destroy the very "basis" of Horie's alleged invention which is to provide an active layer which is much more transmissive at ends thereof than at the central portion thereof.

Claim 9 requires that "the semiconductor laser device includes an active layer comprised of GaAlAs, wherein said active layer is uniform with respect to absorption of an emission wavelength throughout its length including at respective end portions thereof." Again, Horie fails to disclose or suggest this aspect of claim 9.

For at least the foregoing reasons, it is respectfully requested that all rejections be withdrawn. All claims are in condition for allowance. If any minor matter remains to be resolved, the Examiner is invited to telephone the undersigned with regard to the same.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: 

Joseph A. Rhoa
Reg. No. 37,515

JAR:caj
1100 North Glebe Road, 8th Floor
Arlington, VA 22201-4714
Telephone: (703) 816-4000
Facsimile: (703) 816-4100

Table 1

	Front facet Material (Process) Thickness			Rear facet Material (Process) Thickness			Test results		
	Process for window structure	1st. layer	2nd. layer	Process for window structure	1st. layer	2nd. - 5th layers	Accelerated Life test (200mW, 50°C)	Existence of Ga-O & As-O	Change of energy gap
Example1	550 °C	Si (EB) 2nm	Al_2O_3 (IAD) 165nm	550°C	Si (EB) 2nm	Al_2O_3 (IAD) 170nm & Si (EB) 60nm alternatively total 4 layers	no failure within 2000 Hrs	no	1.29eV → 1.41eV
Example2	550 °C	Si (EB) 2nm	Al_2O_3 (IAD) 165nm	550°C	Si (EB) 2nm	SiO_x (IAD) 200nm & TiO_x (IAD) 120nm alternatively total 6 layers	no failure within 2000 Hrs	no	1.29eV → 1.41eV
C.Example1	no	no	Al_2O_3 (EB) 165nm	no	no	Al_2O_3 (EB) 170nm & Si (EB) 60nm alternatively total 4 layers	total failure within 100 Hrs	yes	1.29eV → 1.29eV
C.Example2	no	Si (EB) 2nm	Al_2O_3 (IAD) 165nm	no	Si (EB) 2nm	Al_2O_3 (IAD) 170nm & Si (EB) 60nm alternatively total 4 layers	total failure within 250 Hrs	yes	1.29eV → 1.29eV
C.Example3	no	no	Al_2O_3 (EB) 165nm	no	no	SiO_x (IAD) 200nm & TiO_x (IAD) 120nm alternatively total 6 layers	total failure within 100 Hrs	yes	1.29eV → 1.29eV

Exhibit 1